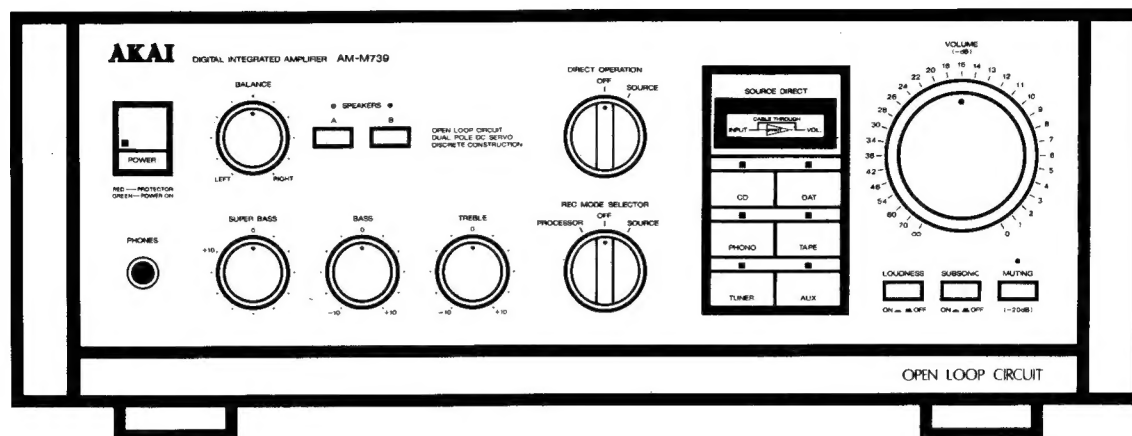


# AKAI SERVICE MANUAL



## DIGITAL INTEGRATED AMPLIFIER

## MODEL AM-M739

## SPECIFICATIONS

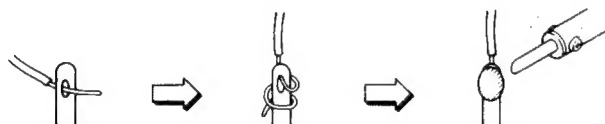
<b>Power output</b>		<b>Output level/Impedance</b>	
By FTC	80W + 80W/6 ohms	TAPE REC OUT	150 mV/47 kohms
By DIN (1 kHz)	80W + 80W/6 ohms	Damping factor	30 (1 kHz)
Power bandwidth	10 Hz to 60 kHz/0.1%	Residual noise	0.5 mV
Total harmonic distortion	0.008% (1 kHz, 8 ohms)	S/N	
PHONO max. input level	250 mV (MM)	PHONO (MM)	8.5 dB
Frequency response		TUNER etc.	100 dB
PHONO	+0.2 dB	Channel separation	60 dB
CD Direct	5 Hz to 100 kHz	Audio mute	20 dB
Tone control		Required speaker impedance	
Treble	+10 dB	A or B	6 to 16 ohms
Bass	+10 dB	A + B	12 to 16 ohms
Super bass	+10 dB	Dimensions	385 (W) x 139 (H) x 330 (D) mm (15.2 x 5.5 x 13.0 inches)
Input sensitivity/Impedance		Weight	8.7 kg (19.1 lbs)
PHONO (MM)	2.5 mV/47 kohms		
TUNER etc.	150 mV/47 kohms		

\* For improvement purposes, specifications and design are subject to change without notice.

# ★ SAFETY INSTRUCTIONS

## PRECAUTIONS DURING SERVICING

1. Parts identified by the  $\Delta$  symbol parts are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.  
Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
  - 1) Wires covered with PVC tubing
  - 2) Double insulated wires
  - 3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
  - 1) Insulation Tape
  - 2) PVC tubing
  - 3) Spacers (Insulating Barriers)
  - 4) Insulation sheets for transistors
  - 5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).

7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

## SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 M ohms. but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be headphone jacks line-in-out jacks etc. more than 2.2 M ohms (ground terminals, microphone jacks).

## PRECAUTIONS FOR LITHIUM BATTERY

The lithium battery may explode when heated excessively.

[OBSERVE THE FOLLOWING WHEN REPLACING]

- Replace with the same make and type only.
- Use soldering iron in "recommended way" only.
- Place battery in correct polarity.
- Do not short the terminals.
- Do not recharge battery.
- Do not dispose of battery in fire.



[DANGER]



[RECOMMENDED WAY]

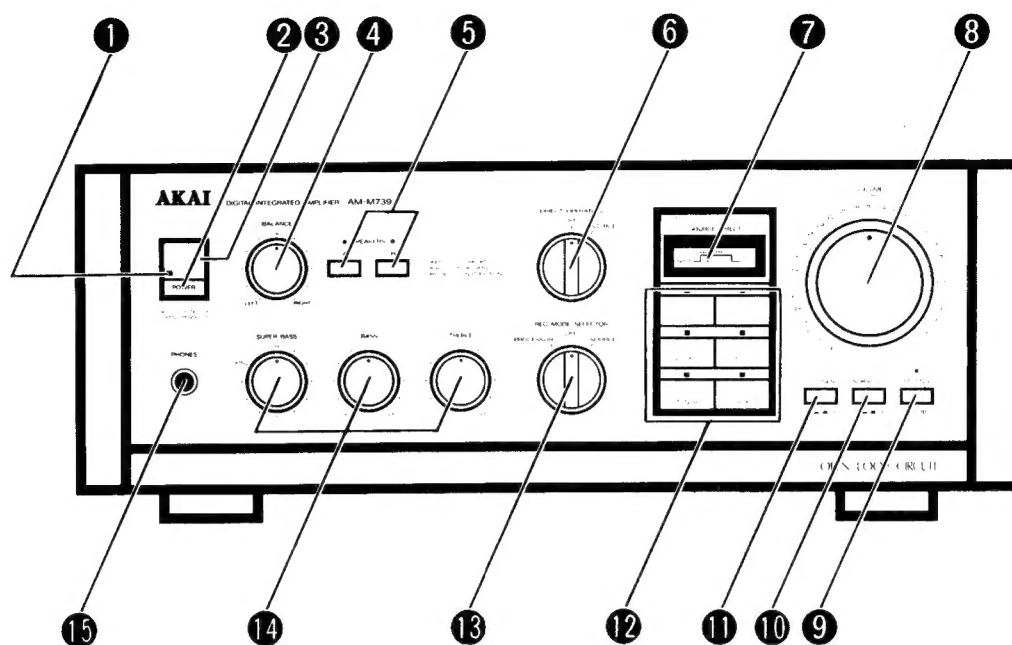
# ★ INFORMATION

## SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbols	Principal Destinations
[A]	USA
[B]	UK
[C]	Canada
[E]	Europe (except UK)
[J]	Japan
[S]	Australia
[V]	W. Germany only
[U]	Universal Area
[Y*]	Custom version

# I. CONTROLS

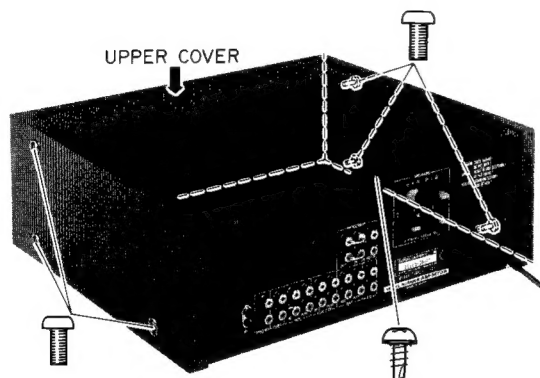


- 1 POWER Indicator**  
Indicates the power is turned on. Also indicates the speaker protection circuit operation. When the speaker protection system is engaged, the indicator will be red.
- 2 POWER Switch**  
To turn the Akai amplifier on and off.
- 3 Remote control receiver**  
For remote control operation.
- 4 BALANCE Control**  
To adjust the left and right channel balance.
- 5 SPEAKERS (A/B) Switches and Indicators**  
To select the speaker system.
- 6 DIRECT OPERATION Switch**  
To select the playback operation mode of the Akai amplifier.
- 7 SOURCE DIRECT Display**  
Shows the DIRECT OPERATION switch position.
- 8 VOLUME (—dB: minus decibel) Control**  
To adjust the volume level. The 0 dB (zero decibel) position is the maximum volume of the amplifier.
- 9 MUTING Switch and Indicator**  
To reduce volume instantly during playback without using the VOLUME control.
- 10 SUBSONIC Switch (ON — /OFF — )**  
To turn the subsonic filter on and off.
- 11 LOUDNESS Switch (ON — /OFF — )**  
For instant compensation of the tone setting at low volume.
- 12 Input select buttons and Indicators**  
To select the playback source you want to listen to.
- 13 REC MODE SELECTOR Switch (PROCESSOR/OFF/SOURCE)**  
For recording operation.
- 14 Tone controls (SUPER BASS/BASS/TREBLE)**  
To adjust the super bass note (super bass), bass note (bass) and high note (treble) levels.
- 15 Headphones (PHONES) jack**  
For headphone listening.

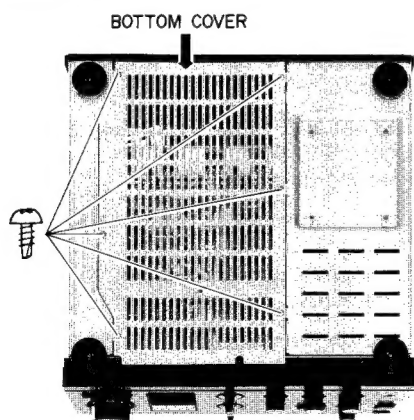
## II. DISASSEMBLY

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

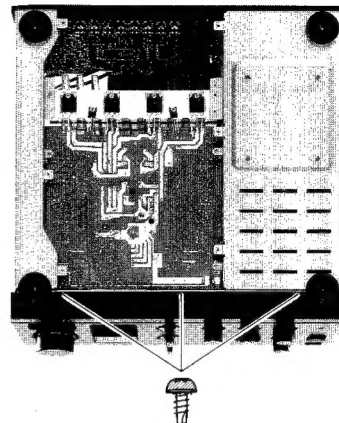
### 1 Removal of Upper Cover



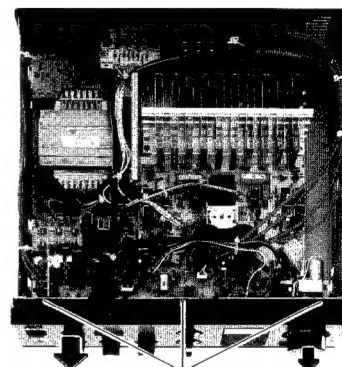
### 2 Removal of Bottom Cover



### 3 Removal of Front panel



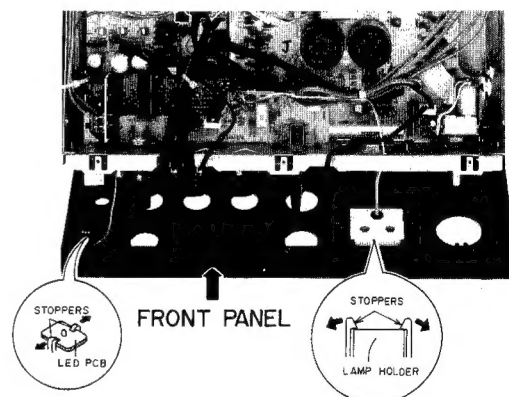
### 4



× Remove VOLUME CONTROL KNOB first, then pull out Front panel to arrow direction.

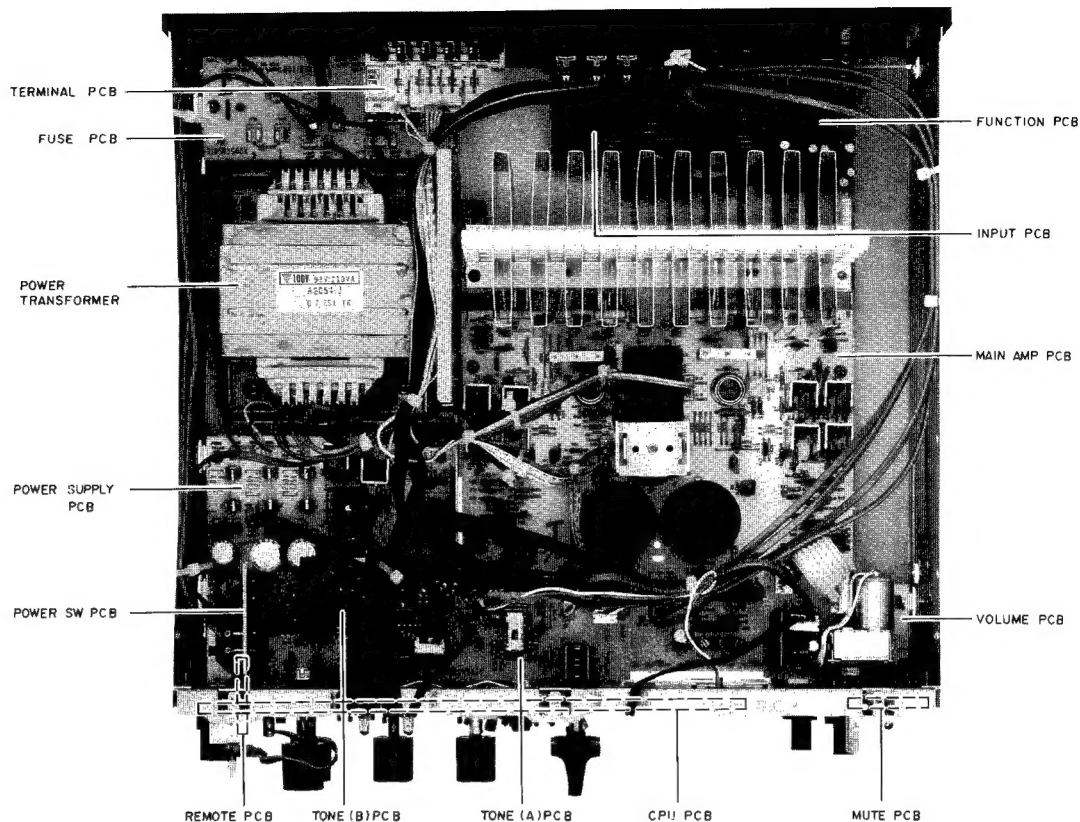
VOLUME CONTROL KNOB

### 5



× Remove the LED PCB and LAMP HOLDER by release the STOPPERS as figured.

### III. PRINCIPAL PARTS LOCATION



### IV. ELECTRICAL ADJUSTMENT

#### 4-1. ADJUSTMENT OF IDLING CURRENT

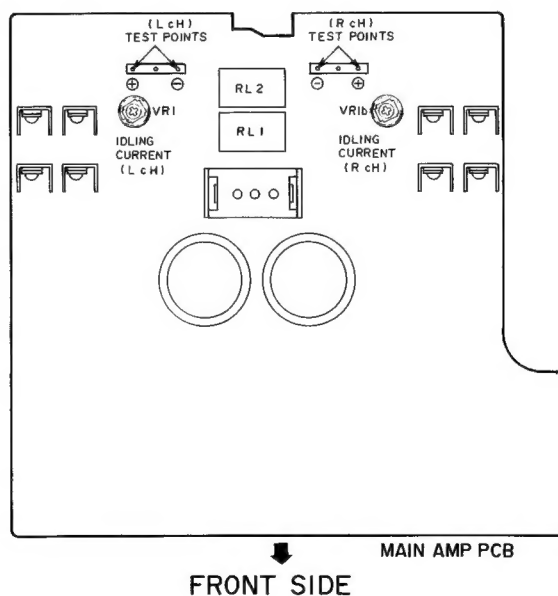


Fig. 4-1 Main Amp PCB Test points and adjustment points

**NOTE:** This adjustment is adjust with no signal input and volume control at minimum conditions, also adjust after 1 minute later from turned on the power.

- 1) Connect a digital DC Voltmeter between test points  $\oplus$  and  $\ominus$  of left or right channel.
- 2) Adjust VR1 (L CH.) or VR1b (R CH.) so that the reading on the digital DC Voltmeter is 20 mV.

## V. PARTS LIST

### ATTENTION

1. When placing an order for parts, be sure to list Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering.  
If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

### HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

b) PC Board

#### 2. HEAD BASE BLOCK

REF. NO.	PART NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

A small "x" indicates that this part is not shown in the Photo or Illustration.

This number corresponds with the individual parts index number in that figure.

This number corresponds with the Figure Number.

#### 6. MAIN PC BOARD

REF. NO.	PART NO.	DESCRIPTION
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
6-C1B	EC-350949	C MMY V 223M 250DC [J]
6-C1C	EC-338397	C MMY V 223M 125AC [C,A]
6-X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A]: AAL(U.S.A.) [S]: SAA(Australia)  
[B]: BEAB(England) [U]: U/T(Universal Area)  
[C]: CSA(Canada) [V]: VDE(W. Germany)  
[E]: CEE(Europe) [Y]: Custom Version  
[J]: JPN(Japan)

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No. listed at right of Part No.

### WARNING

⚠ (\*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

### AVERTISSEMENT

⚠ (\*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

## 1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	*BT-368203	TRANS POW A2054-B
2	*BT-368202	TRANS POW A2054-E,V
3	ED-368248	D LED SLB-221PVW RED&GREEN
4	ED-376939	D LED SLR56PC 3F GREEN
5	ED-376938	D LED SLR56VC 3F RED
6	ED-360409	D PHOTO PN323B
7	*ED-330319	D SILICON DBA10B 100/1.0A
8	ED-348990	D SILICON H DS446
9	ED-301911	D SILICON H DS448
10	ED-344280	D SILICON H GMA-01-FY2 F05
11	*ED-348786	D SILICON RB154 400/1.5A
12	*ED-368225	D SILICON RB602 200/6.0A
13	ED-378503J	D ZENER H HZS20J B1 F05
14	ED-346554	D ZENER H HZ11L C3
15	ED-346567	D ZENER H HZ16L 1
16	ED-346571	D ZENER H HZ20L 1
17	ED-330219	D ZENER H HZ20L 2
18	ED-346576	D ZENER H HZ24L 1
19	ED-337990	D ZENER H HZ27L 1
20	ED-338333	D ZENER H HZ5 B2
21	ED-343410	D ZENER H HZ6L A1
22	ED-346532	D ZENER H HZ7L A3
23	*EF-364518	FUSE BET T 250V 2.50A
24	*EF-358974	FUSE BET T 250V 630MA
25	*EF-623125	FUSE SEMKO T 250V 2.50A
26	*EF-601942	FUSE SEMKO T 250V 630MA
27	EI-373980	IC BA15218N
28	EI-353421	IC BA6229
29	EI-345474	IC HA12002
30	EI-368231	IC LC6543C-*** A2054 CUSTOM
31	EI-368240	IC LC7822
32	EI-344764	IC M5218P-21
33	EI-362588	IC M5238P
34	EI-367271	IC UPC1490HA
35	EI-349372	OSC CE CSA4.00MG 4MHZ
36	EL-368264	PL CORD 14.0V 100MA 200/200
37	*EO-338409	COIL LF FKOB160MH02 250UH
38	EQ-337159	RELAY POW G4Z-2282P 2NO 24V
39	EQ-344440-A	RELAY SIG G2VN-287P 2TR 24V
40	*ER-345751	R FUSE H S10 ERD2FC 1/4W 15ROG
41	*ES-361970	SW PUSH SDDL B1 01-1
42	ES-368227	SW PUSH SPUL** 2 THROW N
43	ES-368239	SW ROTARY SRBU***
44	ES-368238	SW ROTARY SRRU***
45	ES-349474	SW TACT SKHAM004A
46	ET-354415	TR DTA144ES
47	ET-360399	TR DTC114TS
48	ET-354365	TR DTC114YS
49	ET-354371	TR DTC124ES
50	ET-354094	TR DTC144WS
51	ET-368249	TR DTD114TS
52	ET-348898	TR FET 2SJ40 C.D.E F05
53	ET-321016	TR FET 2SK117 GR,BL
54	ET-337759	TR FET 2SK246 GR

Ref. No.	Part No.	Description
55	ET-338244	TR 2SA1207 R,S
56	ET-348829	TR 2SA1209 S,T
57	*ET-345626	TR 2SA1248 S,T
58	ET-353899	TR 2SA1317 S,T,U
59	ET-349593	TR 2SA1348 F05
60	*ET-368758	TR 2SA1491 P,Y
61	*ET-327714	TR 2SB631K F
62	ET-338410	TR 2SC2878 A,B
63	ET-348830	TR 2SC2909 S,T
64	ET-348831	TR 2SC2911 S,T
65	*ET-345625	TR 2SC3116 S,T
66	ET-360067	TR 2SC3330 T,U F05
67	ET-349592	TR 2SC3400 F05
68	*ET-368760	TR 2SC3855 P,Y
69	*ET-368251	TR 2SC3964
70	*ET-362113	TR 2SD1406 Y,GR
71	*ET-321596	TR 2SD600K F
72	*ET-310148	TR 2SD612K E,F
73	EV-368268	VR ROTARY *A2054 B104X2
74	EV-355457	VR ROTARY RKDA2S 100KCX2
75	EV-355466	VR ROTARY RKDA20 100KCX2
76	EV-368235	VR ROTARY RK1631110 SPCL W105
77	EV-368245	VR SPL RK16312MA
78	EZ-358816	BATTERY LITHIUM BR2032-1HF



## 2. P.C BOARD BLOCK

Ref. No.	Part No.	Description
1A	BA-A2054A020E	PC(##) MAIN AMP BLK AM-M739(E) [E,B]
1B	BA-A2054A020F	PC(##) MAIN AMP BLK AM-M739(V) [V]
2A	BA-A2054A030C	PC(##) CPU BLK DA-U730(J) [E,B]
2B	BA-A2054A030D	PC(##) CPU BLK AM-M739(V) [V]

PC (##) MAIN AMP BLK CONSISTS OF FOLLOWING P.C BOARD.

- MAIN AMP P.C BOARD
- POWER SUPPLY P.C BOARD
- FUSE P.C BOARD
- POWER SW P.C BOARD
- PHONE P.C BOARD

PC (##) CPU BLK CONSISTS OF FOLLOWING P.C BOARD.

- CPU P.C BOARD
- TONE (A) P.C BOARD
- TONE (B) P.C BOARD
- FUNCTION P.C BOARD
- JACK P.C BOARD
- PROCESSOR P.C BOARD
- VOLUME P.C BOARD
- MUTE P.C BOARD
- LED P.C BOARD
- REMOTE P.C BOARD

## 3. MAIN AMP P.C BOARD

Ref. No.	Part No.	Description
C5	EC-368224	C EC P 103M SNP 822M 56.0DC
C6	EC-368224	C EC P 103M SNP 822M 56.0DC
C10	EC-355461	C MY V MKT 334K 100DC
C18	EC-326583	C MMY V CUT CF921 473K 400DC
D1	ED-330219	D ZENER H HZ20L 2
D2	ED-330219	D ZENER H HZ20L 2
D3	ED-343410	D ZENER H HZ6L A1
D4	ED-346554	D ZENER H HZ11L C3
D5	ED-346554	D ZENER H HZ11L C3
D6	ED-348990	D SILICON H DS446
D7	ED-348990	D SILICON H DS446
D8	ED-301911	D SILICON H DS448
D9	ED-301911	D SILICON H DS448
D10	ED-301911	D SILICON H DS448
D11	ED-301911	D SILICON H DS448
D12	ED-301911	D SILICON H DS448
D13	ED-348990	D SILICON H DS446
D14	ED-348990	D SILICON H DS446
D15	*ED-368225	D SILICON RB602 200/6.0A
IC1	EI-362588	IC M5238P
IC2	EI-345474	IC HA12002
L1	EO-332116	COIL FIX 2 103AK-006A 2R2K
RL1	EQ-337159	RELAY POW G4Z-2282P 2NO 24V
RL2	EQ-337159	RELAY POW G4Z-2282P 2NO 24V
R6	ER-368282	R OMF H S15 FS 2W 332J
R7	ER-368282	R OMF H S15 FS 2W 332J
R17	ER-359269	R OMF H S12 FS 1W 221J
R18	ER-359269	R OMF H S12 FS 1W 221J
R22	ER-378643J	R OMF H S12 FS 1W 682J
R23	ER-378643J	R OMF H S12 FS 1W 682J
R24	ER-378497J	R CB H S10 FS RDS 1/4W 271J
R25	ER-378497J	R CB H S10 FS RDS 1/4W 271J
R31	ER-378501J	R CB H S10 FS RDS 1/4W 302J
R32	ER-378502J	R CB H S10 FS RDS 1/4W 391J
R33	ER-378499J	R CB H S10 FS RDS 1/4W 100J
R34	ER-378499J	R CB H S10 FS RDS 1/4W 100J

Ref. No.	Part No.	Description
R35	ER-372990	R CB H S10 FS RDS 1/4W 150J
R36	ER-372990	R CB H S10 FS RDS 1/4W 150J
R39	ER-368226	R CT P R33+R33 5W
R40	ER-368285	R OMF H S15 FS 2W 120J
R41	ER-368285	R OMF H S15 FS 2W 120J
R57	ER-368282	R OMF H S15 FS 2W 332J
SW1	ES-368227	SW PUSH SPUL** 2 THROW N [LOUDNESS/SUBSONIC]
TR1	ET-321016	TR FET 2SK117 GR,BL
TR2	ET-348831	TR 2SC2911 S.T
TR3	ET-348829	TR 2SA1209 S.T
TR4	ET-348830	TR 2SC2909 S.T
TR5	ET-348830	TR 2SC2909 S.T
TR6	ET-348831	TR 2SC2911 S.T
TR7	ET-348829	TR 2SA1209 S.T
TR8	ET-348831	TR 2SC2911 S.T
TR9	ET-348829	TR 2SA1209 S.T
TR10	ET-348830	TR 2SC2909 S.T
TR11	ET-338244	TR 2SA1207 R.S
VR1	EV-380204	R S-FIX H RH1051C 0.15W 102

## 4. POWER SUPPLY P.C BOARD

Ref. No.	Part No.	Description
D101	ED-337990	D ZENER H HZ27L 1
D102	ED-337990	D ZENER H HZ27L 1
D103	ED-337990	D ZENER H HZ27L 1
D104	ED-337990	D ZENER H HZ27L 1
D105	ED-346567	D ZENER H HZ16L 1
D106	ED-346567	D ZENER H HZ16L 1
D109	ED-346571	D ZENER H HZ20L 1
D110	ED-346576	D ZENER H HZ24L 1
D111	ED-346532	D ZENER H HZ7L A3
D112	*ED-348786	D SILICON RB154 400/1.5A
D113	*ED-330319	D SILICON DBA10B 100/1.0A
D115	ED-378503J	D ZENER H HZS20J B1 F05
D116	ED-378503J	D ZENER H HZS20J B1 F05
D117	ED-344280	D SILICON H GMA-01-FY2 F05
D118	ED-344280	D SILICON H GMA-01-FY2 F05
R103	ER-378504J	R CB H S10 FS RDS 1/4W 121J
R104	ER-378504J	R CB H S10 FS RDS 1/4W 121J
R105	ER-378504J	R CB H S10 FS RDS 1/4W 121J
R106	ER-378504J	R CB H S10 FS RDS 1/4W 121J
R107	ER-378499J	R CB H S10 FS RDS 1/4W 100J
R108	ER-378504J	R CB H S10 FS RDS 1/4W 121J
R109	ER-378504J	R CB H S10 FS RDS 1/4W 121J
TR101	ET-337759	TR FET 2SK246 GR
TR102	ET-337759	TR FET 2SK246 GR
TR103	*ET-345625	TR 2SC3116 S.T
TR104	*ET-345626	TR 2SA1248 S.T
TR105	ET-337759	TR FET 2SK246 GR
TR106	ET-337759	TR FET 2SK246 GR
TR107	*ET-321596	TR 2SD600K F
TR108	*ET-327714	TR 2SB631K F
TR109	ET-337759	TR FET 2SK246 GR
TR110	*ET-310148	TR 2SD612K E,F
TR111	ET-337759	TR FET 2SK246 GR
TR112	*ET-362113	TR 2SD1406 Y,GR
TR113	ET-337759	TR FET 2SK246 GR
TR114	*ET-362113	TR 2SD1406 Y,GR
F3A	*EF-601942	FUSE SEMKO T 250V 630MA [E,V]
F4A	*EF-601942	FUSE SEMKO T 250V 630MA [E,V]
F5A	*EF-601942	FUSE SEMKO T 250V 630MA [E,V]
F3B	*EF-358974	FUSE BET T 250V 630MA [B]
F4B	*EF-358974	FUSE BET T 250V 630MA [B]
F5B	*EF-358974	FUSE BET T 250V 630MA [B]



5. FUSE P.C BOARD

Ref. No.	Part No.	Description
F1A	*EF-623125	FUSE SEMKO T 250V 2.50A [E,V]
F1B	*EF-364518	FUSE BET T 250V 2.50A [B]
LV201	*EO-338409	COIL LF FKOB160MH02 250UH [V]

6. POWER SW P.C BOARD

Ref. No.	Part No.	Description
C301	*EC-338496	C CE V FZ 472P 400AC
SW301	*ES-361970	SW PUSH SDDL B1 01-1 [POWER SW]

7. PHONE P.C BOARD

Ref. No.	Part No.	Description
J401	EJ-369995	PHONE J 3P HLJ0540-410 GP 6.3 [PHONES]
R401	ER-378517J	R OMF H S15 FS 2W 681J

8. CPU P.C BOARD

Ref. No.	Part No.	Description
BT1	EZ-358816	BATTERY LITHIUM BR2032-1HF
D1	ED-301911	D SILICON H DS448
D2	ED-301911	D SILICON H DS448
D3	ED-301911	D SILICON H DS448
D4	ED-376939	D LED SLR56PC 3F GREEN [CD]
D5	ED-376939	D LED SLR56PC 3F GREEN [PHONO]
D6	ED-376939	D LED SLR56PC 3F GREEN [TUNER]
D7	ED-376939	D LED SLR56PC 3F GREEN [DAT]
D8	ED-376939	D LED SLR56PC 3F GREEN [TAPE]
D9	ED-376939	D LED SLR56PC 3F GREEN [AUX]
D10	ED-376939	D LED SLR56PC 3F GREEN [SPEAKER A]
D11	ED-376939	D LED SLR56PC 3F GREEN [SPEAKER B]
D14	ED-301911	D SILICON H DS448
D15	ED-301911	D SILICON H DS448
IC1	EI-368231	IC LC6543C-*** A2054 CUSTOM
R10	ER-378608J	R OMF H S12 FS 1W 152J
R11	ER-378608J	R OMF H S12 FS 1W 152J
TR1	ET-360067	TR 2SC3330 T,U F05
TR2	ET-354365	TR DTC114YS
TR3	ET-360399	TR DTC114TS
TR4	ET-354094	TR DTC144WS
TR5	ET-354365	TR DTC114YS
TR6	ET-354365	TR DTC114YS
TR7	ET-354365	TR DTC114YS
TR8	ET-353899	TR 2SA1317 S,T,U
TR9	ET-360399	TR DTC114TS
TR10	ET-368249	TR DTD114TS

Ref. No.	Part No.	Description
TR11	ET-368249	TR DTD114TS
TR12	ET-360399	TR DTC114TS
TR13	ET-360399	TR DTC114TS
TR16	ET-354371	TR DTC124ES
TS1	ES-349474	SW TACT SKHHAM004A [CD]
TS2	ES-349474	SW TACT SKHHAM004A [PHONO]
TS3	ES-349474	SW TACT SKHHAM004A [TUNER]
TS4	ES-349474	SW TACT SKHHAM004A [DAT]
TS5	ES-349474	SW TACT SKHHAM004A [TAPE]
TS6	ES-349474	SW TACT SKHHAM004A [AUX]
TS7	ES-349474	SW TACT SKHHAM004A [SPEAKER B]
TS8	ES-349474	SW TACT SKHHAM004A [SPEAKER A]
X1	EI-349372	OSC CE CSA4.00MG 4MHZ

9. TONE (A) P.C BOARD

Ref. No.	Part No.	Description
D101	ED-301911	D SILICON H DS448
IN101	EL-368264	PL CORD 14.0V 100MA 200/200 [SAMPLING 48KHZ]
RL101	EQ-344440-A	RELAY SIG G2VN-287P 2TR 24V
R105	ER-355214	R OMF H S15 FS 2W 151J
R112	ER-364696	R OMF H S15 FS 2W 221J
SW101	ES-368238	SW ROTARY SRRU*** [DIRECT OPERATION]
TR103	ET-368249	TR DTD114TS
TR104	ET-338410	TR 2SC2878 A,B
TR105	ET-349592	TR 2SC3400 F05
TR106	ET-349593	TR 2SA1348 F05
VR101	EV-368235	VR ROTARY RK1631110 SPCL W105 [BALANCE]

10. TONE (B) P.C BOARD

Ref. No.	Part No.	Description
IC201	EI-373980	IC BA15218N
SW201	ES-368239	SW ROTARY SRBU*** [REC MODE SELECTOR]
VR201	EV-355466	VR ROTARY RKDA20 100KCX2 [TREBLE]
VR202	EV-355457	VR ROTARY RKDA2S 100KCX2 [BASS]
VR203	EV-368268	VR ROTARY *A2054 B104X2 [SUPER BASS]

11. FUNCTION P.C BOARD

Ref. No.	Part No.	Description
D301	ED-344280	D SILICON H GMA-01-FY2 F05
IC301	EI-368240	IC LC7822
IC302	EI-344764	IC M5218P-21
J301	EJ-368241	PIN J T6228 8P W/SHIELD [PHONO/TUNER/TAPE]

Ref. No.	Part No.	Description
J302	EJ-366329	PIN J T5813 P 6P [AUX/DAT]
R317	ER-378518J	R CB H S10 FS RDS 1/4W 151J
R318	ER-378518J	R CB H S10 FS RDS 1/4W 151J
TR301	ET-354415	TR DTA144ES
TR302	ET-348898	TR FET 2SJ40 C,D,E F05

12. JACK P.C BOARD

Ref. No.	Part No.	Description
J401	EJ-368242	PIN J T5812 4P

13. PROCESSOR P.C BOARD

Ref. No.	Part No.	Description
J601	EJ-368244	PIN J T6087 6P [PROCESSOR IN/OUT]

14. VOLUME P.C BOARD

Ref. No.	Part No.	Description
D701	ED-338333	D ZENER H HZ5 B2
FR701	*ER-345751	R FUSE H S10 ERD2FC 1/4W 15R0G
IC701	EI-353421	IC BA6229
VR701	EV-368245	VR SPL RK16312MA [VOLUME]

15. MUTE P.C BOARD

Ref. No.	Part No.	Description
D12	ED-376938	D LED SLR56VC 3F RED [MUTING]
TS9	ES-349474	SW TACT SKHHAM004A [MUTING]

16. LED P.C BOARD

Ref. No.	Part No.	Description
D13	ED-368248	D LED SLB-221PVW RED&GREEN [POWER & PROTECTION]

17. REMOTE P.C BOARD

Ref. No.	Part No.	Description
D801	ED-360409	D PHOTO PN323B
IC801	EI-367271	IC UPC1490HA

## 18. FINAL ASSEMBLY BLOCK

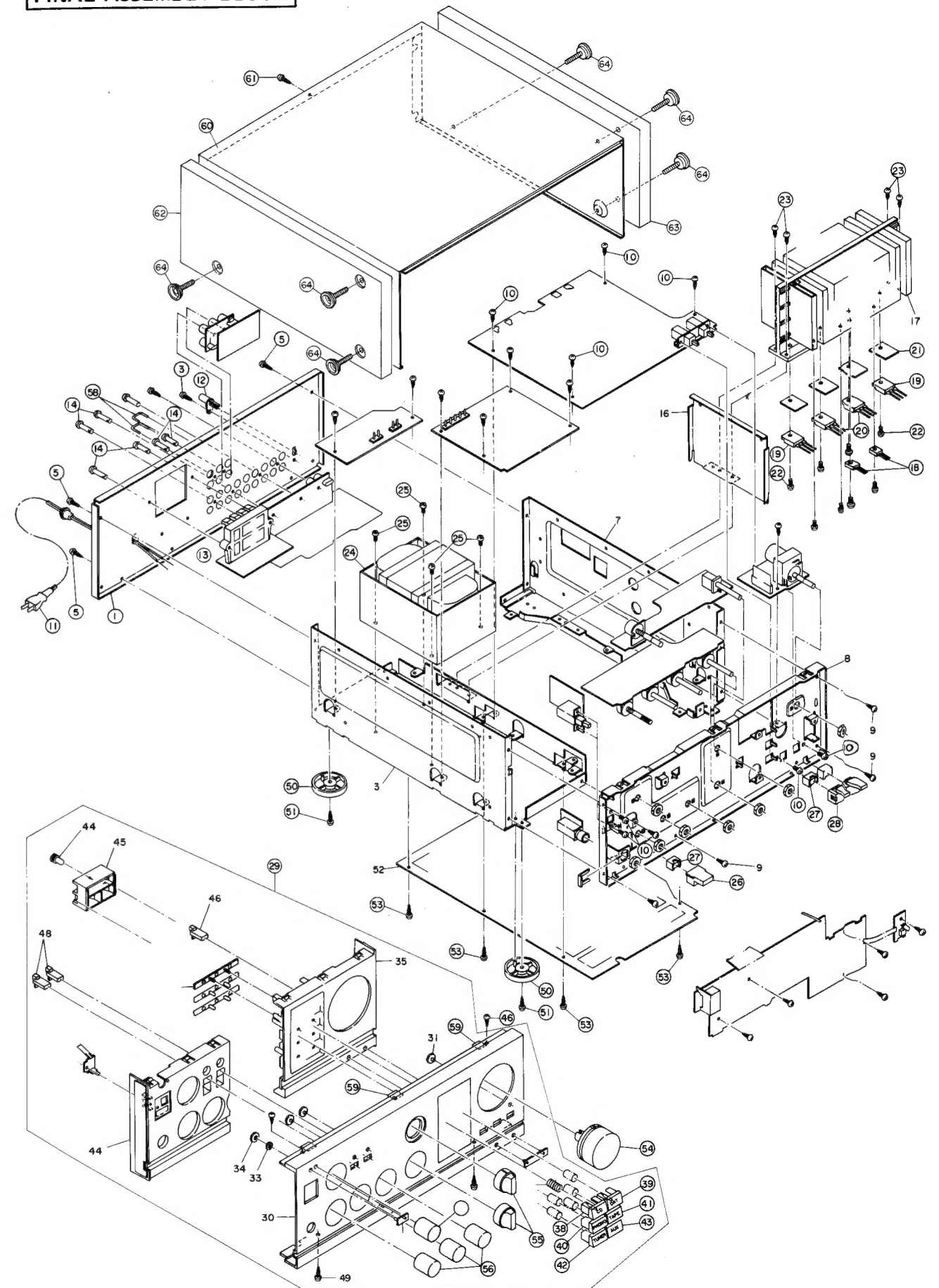
Ref. No.	Part No.	Description
1A	SP-376972J1	PANEL REAR AM-M739(E.V) [E.V]
1B	SP-374647K	PANEL REAR AM-M739(B.S) [B]
4	ZS-447840	T2BR30X08STL CMT
5	ZS-308846	T2BR30X08STL BZN PROJECTION
6	ZS-348375	ST BR30X08STL CMT
9	ZS-422076	PAN30X05STL CMT
10	ZS-336351	T2BR30X08STL NI3
11A	*EW-363672	AC CORD 200 0364 LCFL B070 A EV [E.V]
11B	*EW-363684	AC CORD 200 LCFL B070 A B [B]
12	EJ-329610	TERMINAL W/SCREW UB-0067 L 1P
13	EJ-349401	TERMINAL LEVER YKD21-0027 8P
14	ZS-351886	PT BR30X10STL BNI
15	ZS-332468	T2BR30X20STL NI3 GUIDE
18	*ET-368251	TR 2SC3964 [TR901]
19	*ET-368760	TR 2SC3855 P.Y [TR902]
20	*ET-368758	TR 2SA1491 P.Y [TR903]
21	EZ-345459	TRANSISTOR SUPPORT BFG-20T0-3P
22	ZS-419670	PAN30X12STL CMT
23	ZS-523664	T2BR30X10STL CMT
24A	*BT-368202	TRANS POW A2054-E.V [E.V]
24B	*BT-368203	TRANS POW A2054-B [B]
25	ZS-345624	ST PAN40X08STL CMT CUP
26	SK-374631B	KNOB POW B
27	ZW-368205	FLEXIBLE RING 2414-0-0-086-01
28	SK-374632B	KNOB LOUDNESS B
29	BD-A2054A060C	PANEL FRONT BLK AM-M739-B
32	SM-370750C	NAME PLATE AKAI B2
33	ZW-273802	TW30
34	ZW-653163	RING CS 280STL PKR
37	ZG-374626	SP PUSH INPUT
38	SK-B374630B1	KNOB INPUT CD B PART
39	SK-B374630B2	KNOB INPUT DAT B PART
40	SK-B374630B3	KNOB INPUT PHONO B PART
41	SK-B374630B4	KNOB INPUT TAPE B PART
42	SK-B374630B5	KNOB INPUT TUNER B PART
43	SK-B374630B6	KNOB INPUT AUX B PART
44	BT-368263	COLOR CAP EQ300-42000A BB2-501
46	SK-374633B	KNOB MUTE B
48	SK-374633B	KNOB MUTE B
49	ZS-463353	T2BR30X08STL BNI
50	SA-376945J	FOOT(2) PART
51	ZS-331567	T2BR30X08STL CMT C080
53	ZS-463353	T2BR30X08STL BNI
54	SK-374642B	KNOB VR B
55	SK-375363	KNOB MODE
56	SK-375362	KNOB BALANCE
57	MZ-553948	WIRE BAND F-100
58	EJ-369015	PLUG SHORT-PIN CNT31-0057
59	ZZ-378453	CUSHION
60	SP-374620B	COVER UPPER B
61	ZS-308846	T2BR30X08STL BZN PROJECTION
62	SP-370711	SIDE BOARD (L)
63	SP-370712	SIDE BOARD (R)
64	ZS-365678	SCREW SLIDE TYPE W/WASHER(J)

### SYMBOL FOR COLOR VARIATION

B : BLACK  
G : GOLD

NOTE: Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

## FINAL ASSEMBLY BLOCK



# **AKAI**

**MODEL AM-M739**

## **SCHEMATIC DIAGRAM AND PC BOARDS**

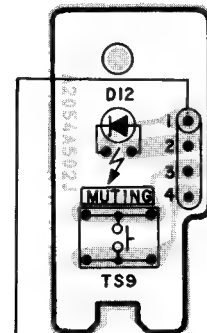
### **TABLE OF CONTENTS**

<b>1. POWER SUPPLY, POWER SW AND FUSE PC BOARDS .....</b>	<b>2</b>
<b>2. CPU, MUTE, LED AND REMOTE PC BOARDS.....</b>	<b>3</b>
<b>3. FUNCTION, CD730, TERMINAL 730 AND PROCESSOR PC BOARDS ...</b>	<b>4</b>
<b>4. TONE(A), TONE(B), VOLUME AND MOTOR PC BOARDS .....</b>	<b>5</b>
<b>5. MAIN AMP AND PHONE PC BOARDS.....</b>	<b>6</b>
<b>6. SCHEMATIC DIAGRAM.....</b>	<b>7</b>
<b>7. BLOCK DIAGRAM .....</b>	<b>8</b>

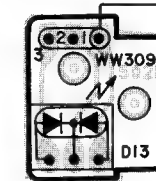




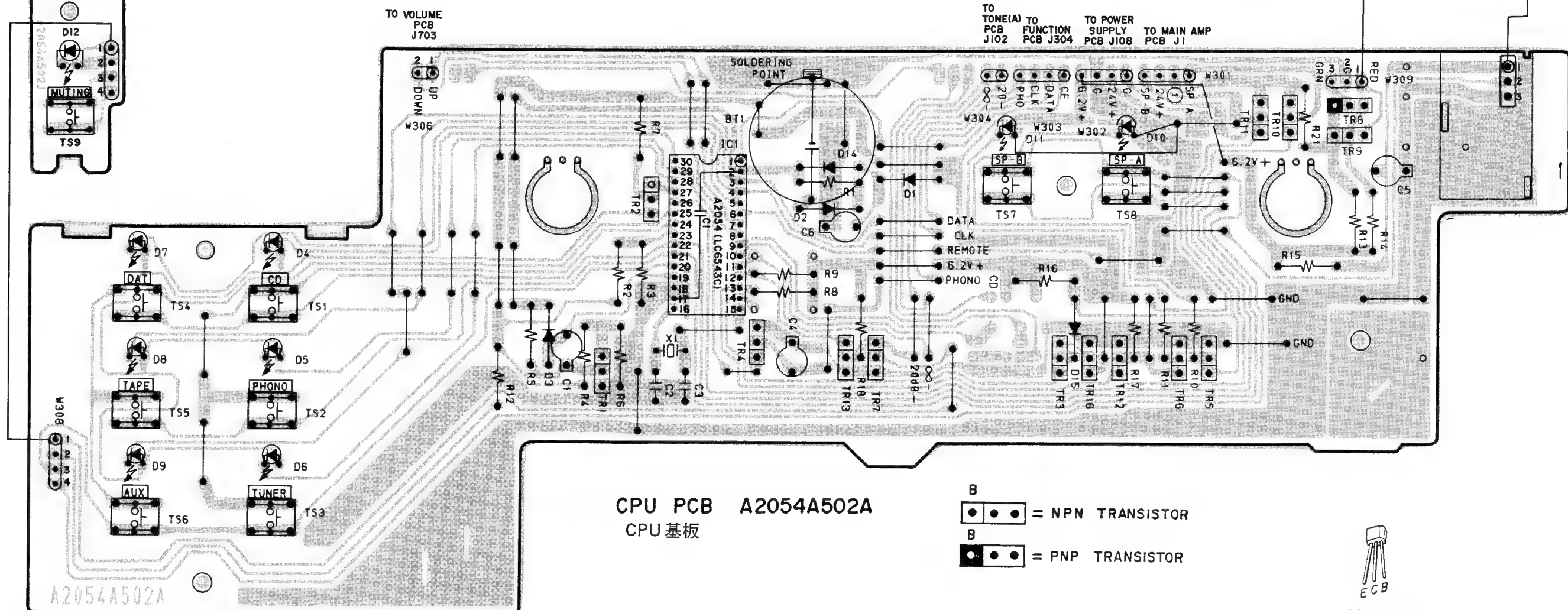
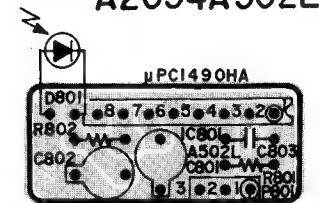
ミュート基板  
MUTE PCB  
A2054A502J



LED 基板  
LED PCB  
A2054A502K



リモート基板  
REMOTE PCB  
A2054A502L



CPU PCB A2054A502A  
CPU 基板

B  
● ● ● = NPN TRANSISTOR  
B  
● ● ● = PNP TRANSISTOR



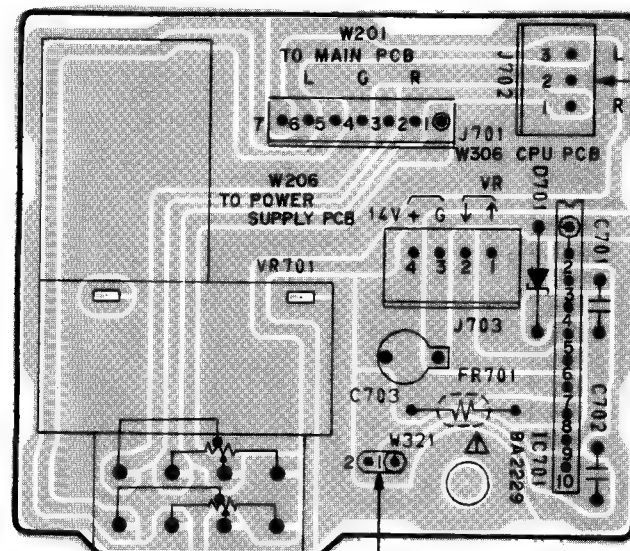
2SC3330  
DTC114YS  
DTC144WS  
2SA1317  
DTC124ES



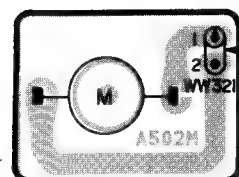


ポリウム基板

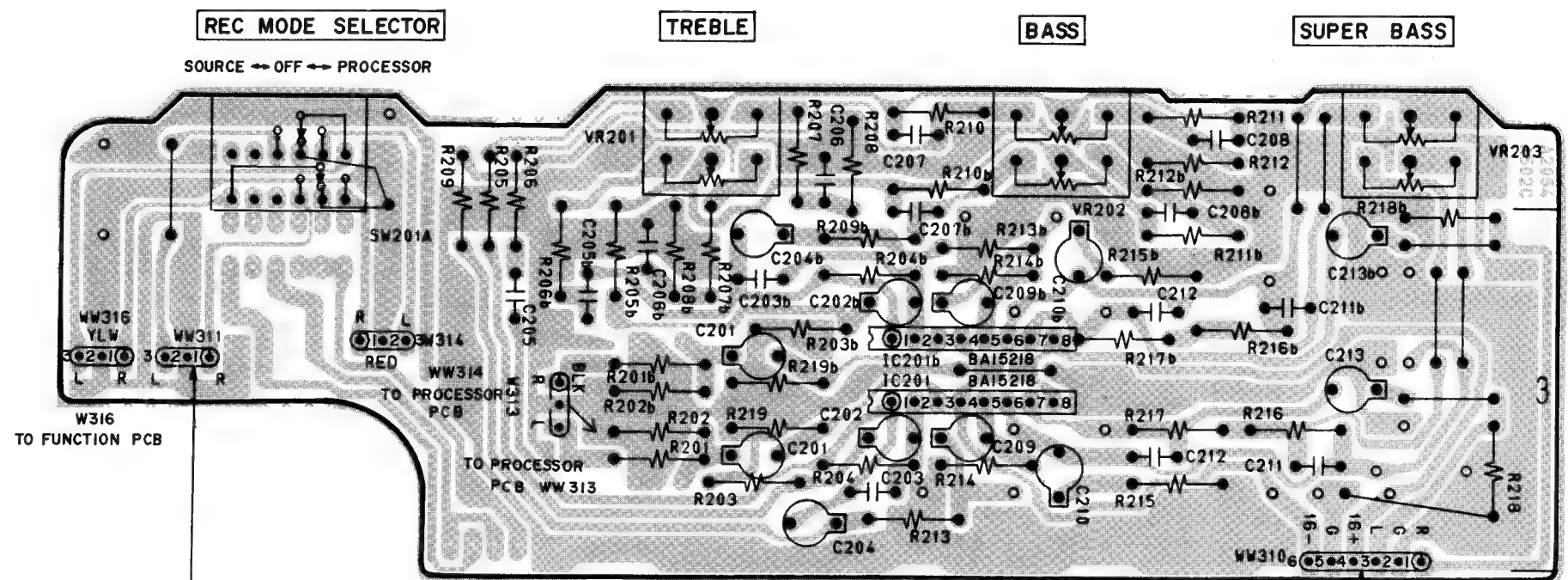
VOLUME PCB A2054A502H



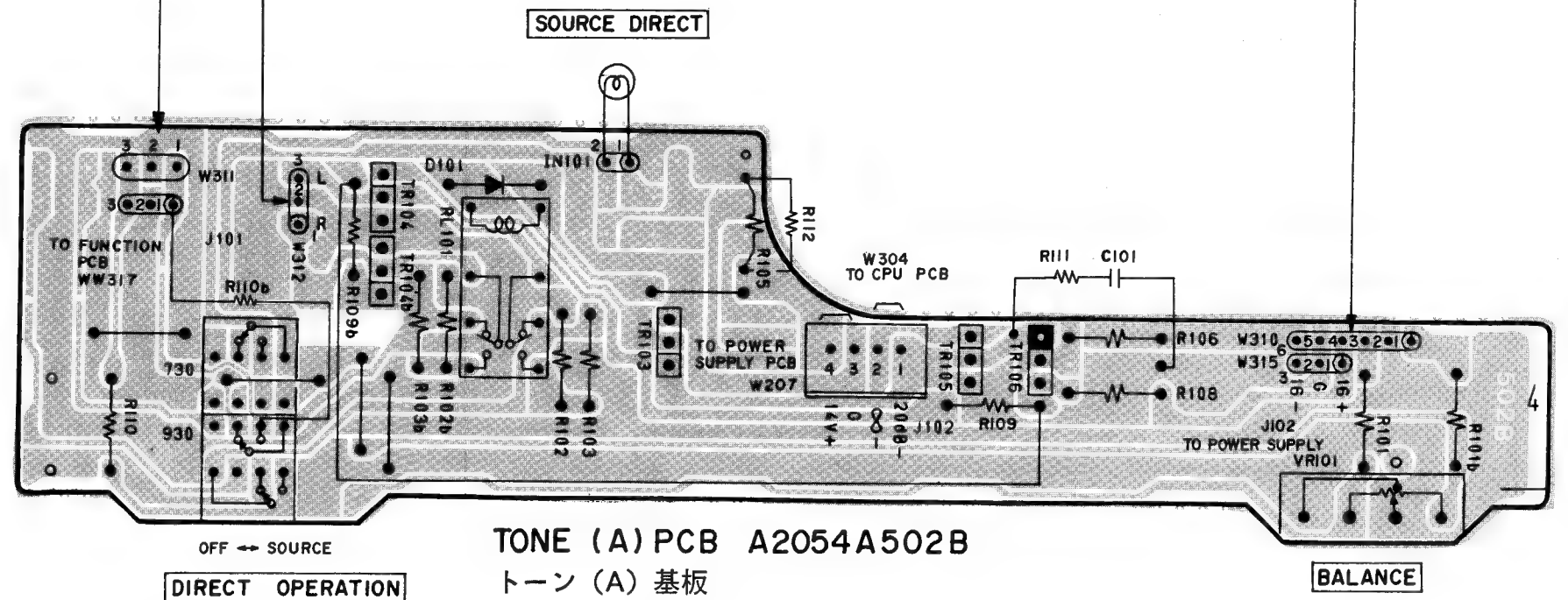
VOLUME



MOTOR PCB A2054A502M  
モーター基板



TONE (B) PCB A2054A502C  
トーン (B) 基板



TONE (A) PCB A2054A502B  
トーン (A) 基板

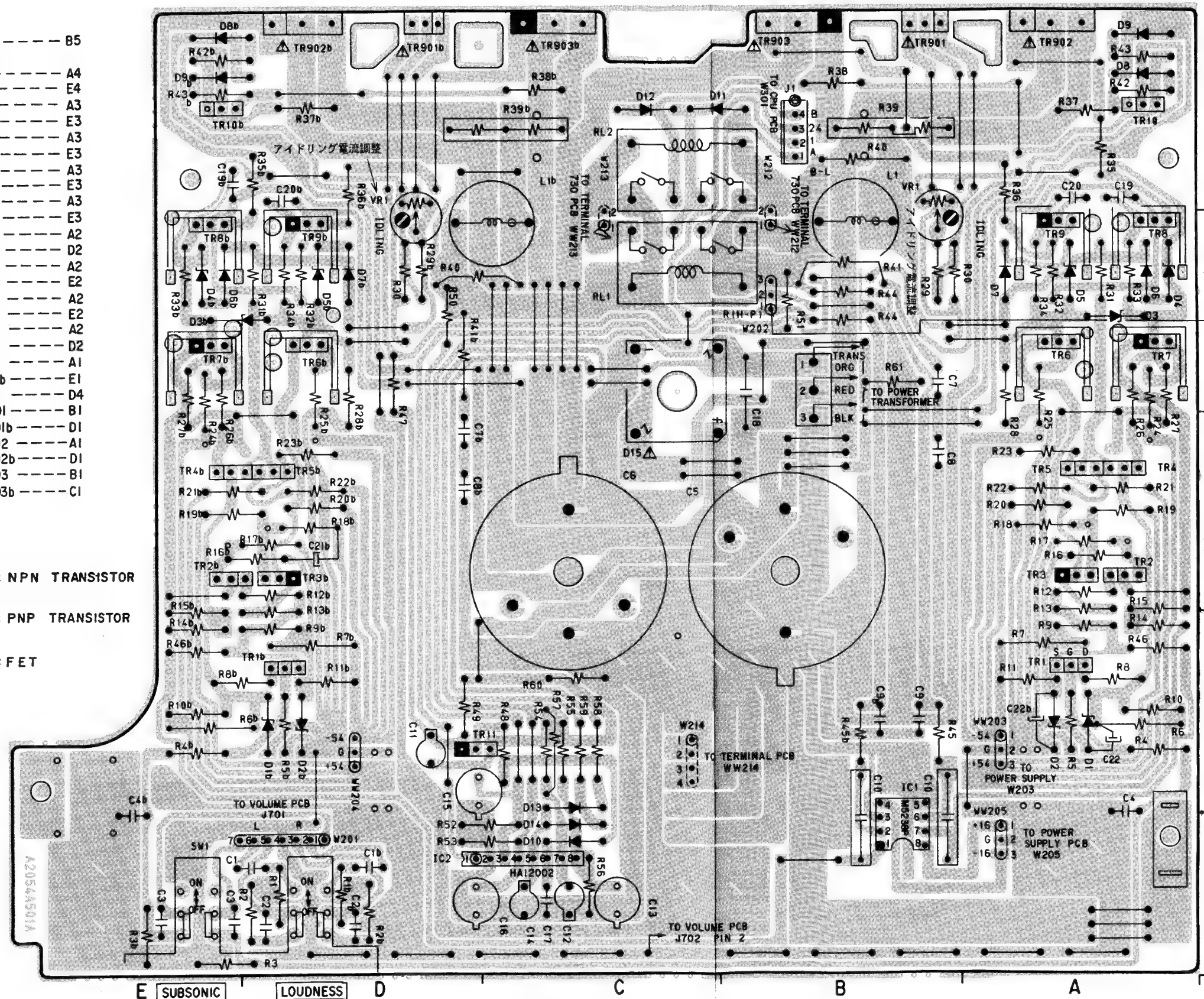
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.  
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.



IC1 ----- B5

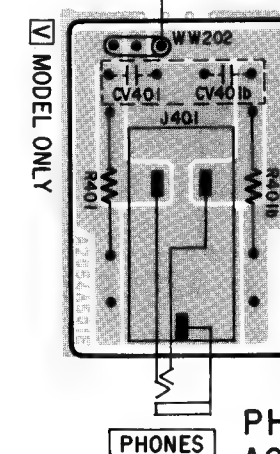
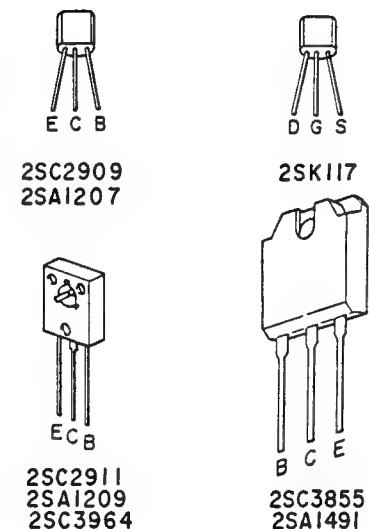
TR1 ----- A4  
 TR1b ----- E4  
 TR2 ----- A3  
 TR2b ----- E3  
 TR3 ----- A3  
 TR3b ----- E3  
 TR4 ----- A3  
 TR4b ----- E3  
 TR5 ----- A3  
 TR5b ----- E3  
 TR6 ----- A2  
 TR6b ----- D2  
 TR7 ----- A2  
 TR7b ----- E2  
 TR8 ----- A2  
 TR8b ----- E2  
 TR9 ----- A2  
 TR9b ----- D2  
 TR10 ----- A1  
 TR10b ----- E1  
 TR11 ----- D4  
 TR901 ----- B1  
 TR901b ----- D1  
 TR902 ----- A1  
 TR902b ----- D1  
 TR903 ----- B1  
 TR903b ----- C1

B  
 ● ● ● = NPN TRANSISTOR  
 B  
 ● ● ● = PNP TRANSISTOR  
 B  
 ● ● ● = FET  
 S G D

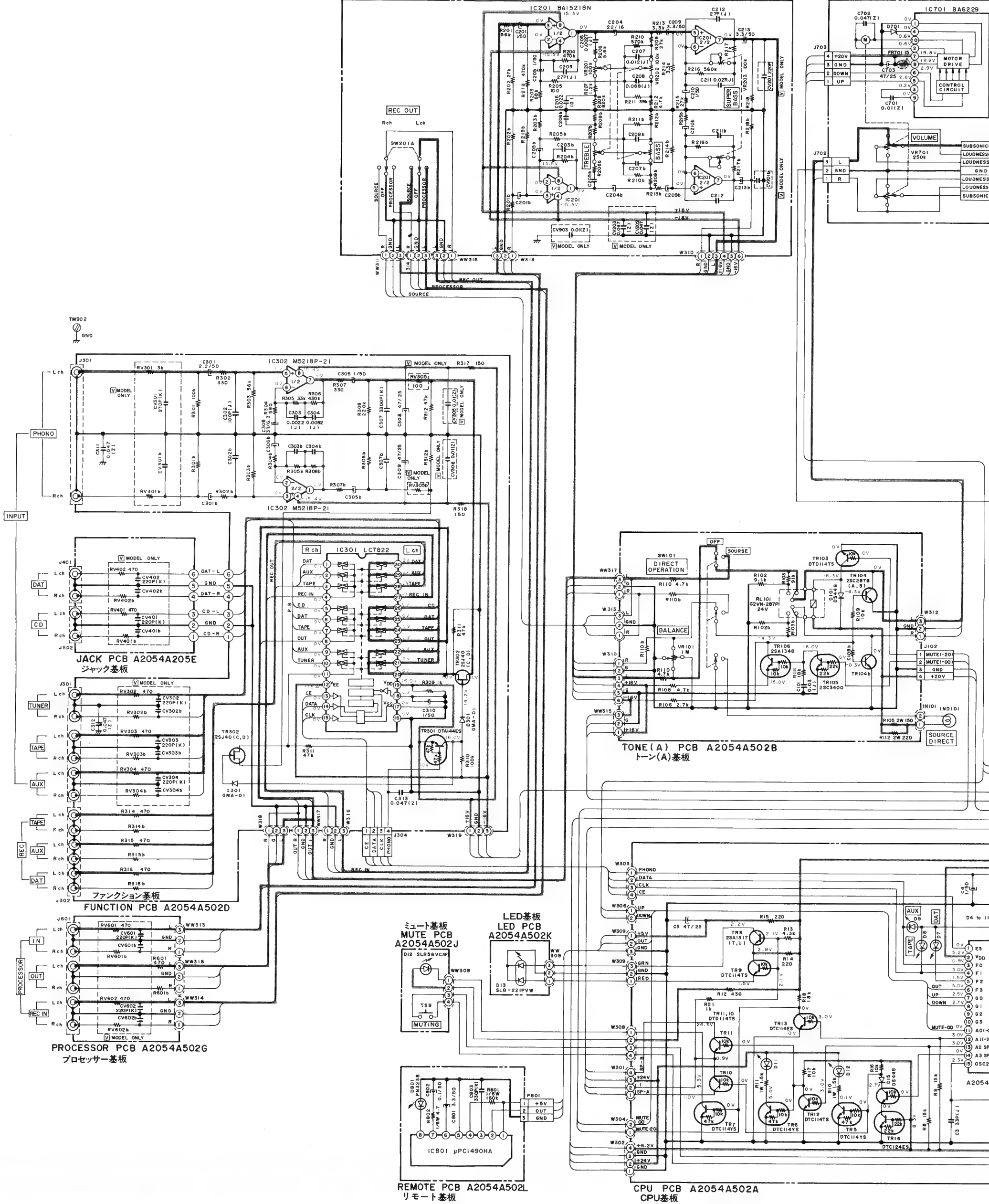


MAIN AMP PCB A2054A501A  
 メインアンプ基板

WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.  
 AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT



PHONE PCB A2054A501E  
 ヘッドホン基板

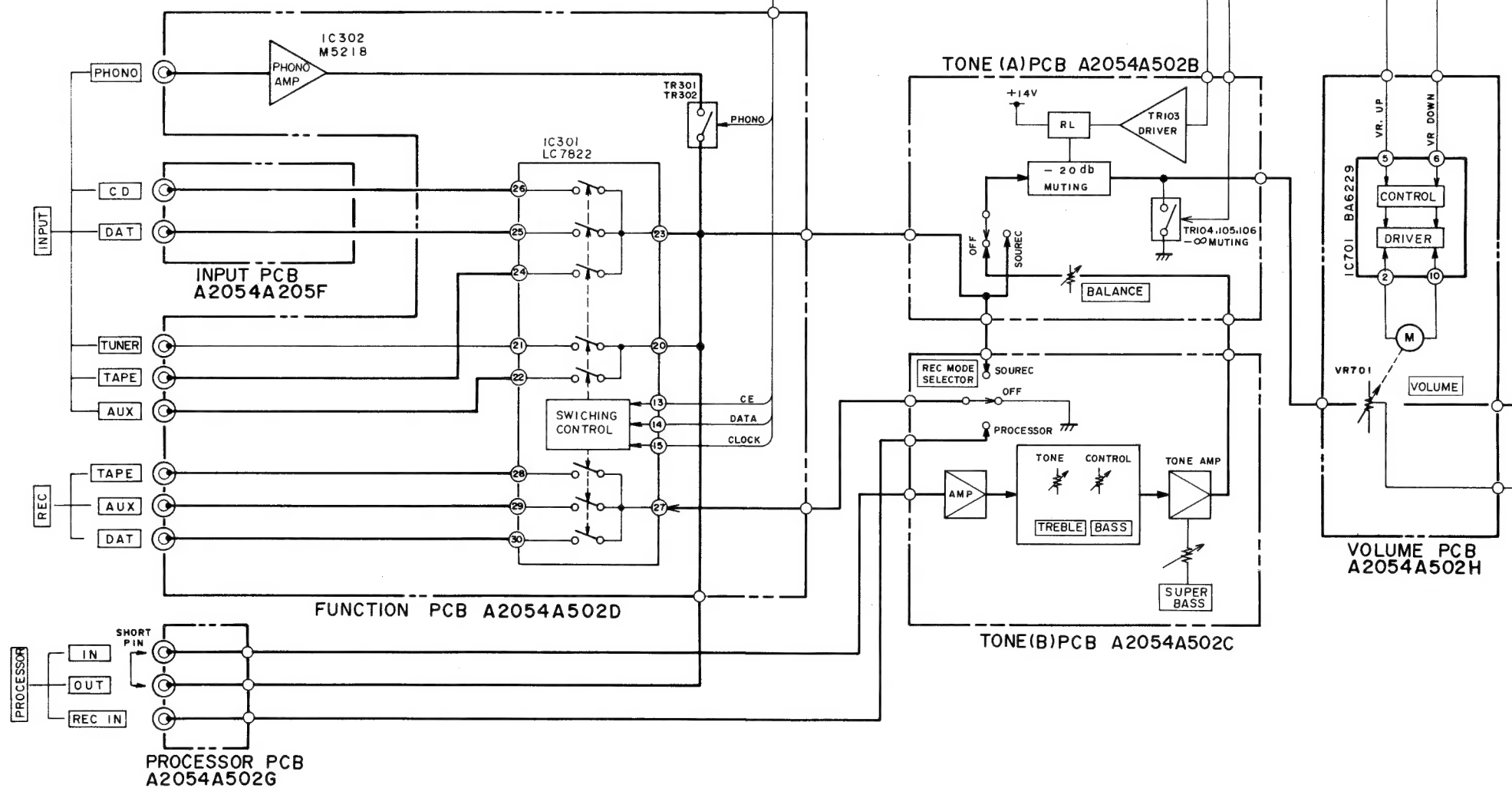
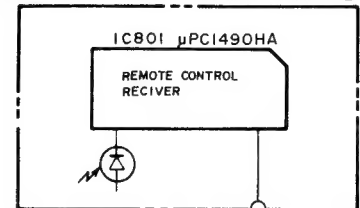




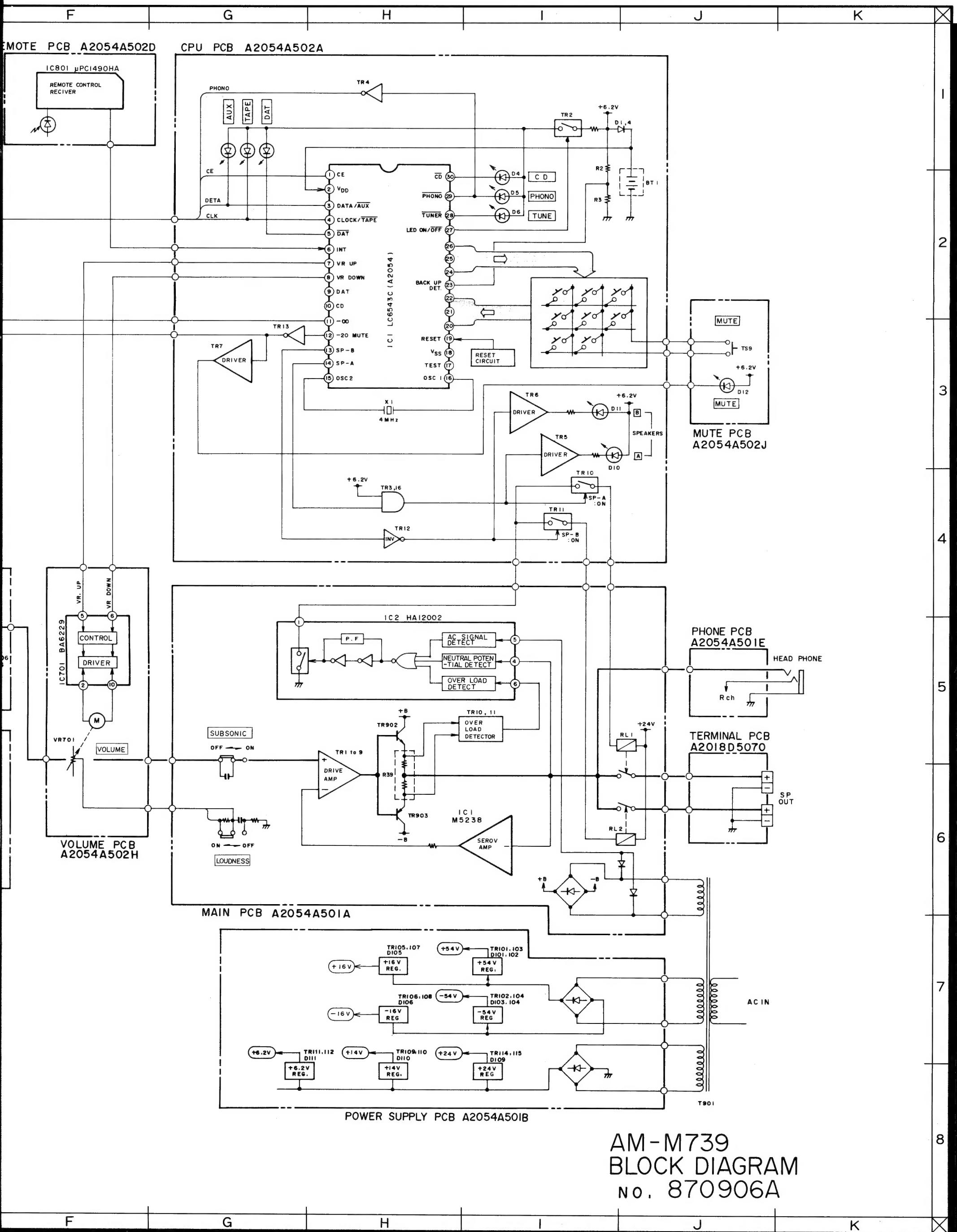


A B C D E F

REMOTE PCB A2054A502D



A B C D E F



AM-M739  
BLOCK DIAGRAM  
No. 870906A

# INDEX

Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
BA-A2054A020E	1A	ED-376939	D11	ER-378518J	R317	ET-360067	TR1
BA-A2054A020F	1B	ED-378503J	13	ER-378518J	R318	ET-360399	47
BA-A2054A030C	2A	ED-378503J	D115	ER-378608J	R10	ET-360399	TR3
BA-A2054A030D	2B	ED-378503J	D116	ER-378608J	R11	ET-360399	TR9
BD-A2054A060C	29	EF-358974	24	ER-378643J	R22	ET-360399	TR12
BT-368202	2	EF-358974	F3B	ER-378643J	R23	ET-360399	TR13
BT-368202	24A	EF-358974	F4B	ES-349474	45	ET-362113	70
BT-368203	1	EF-358974	F5B	ES-349474	TS1	ET-362113	TR112
BT-368203	24B	EF-364518	23	ES-349474	TS2	ET-362113	TR114
BT-368263	44	EF-364518	F1B	ES-349474	TS3	ET-368249	51
EC-326583	C18	EF-601942	26	ES-349474	TS4	ET-368249	TR10
EC-338496	C301	EF-601942	F3A	ES-349474	TS5	ET-368249	TR11
EC-355461	C10	EF-601942	F4A	ES-349474	TS6	ET-368249	TR103
EC-368224	C5	EF-601942	F5A	ES-349474	TS7	ET-368251	69
EC-368224	C6	EF-623125	25	ES-349474	TS8	ET-368251	18
ED-301911	9	EF-623125	F1A	ES-349474	TS9	ET-368758	60
ED-301911	D8	EI-344764	32	ES-361970	41	ET-368758	20
ED-301911	D9	EI-344764	IC302	ES-361970	SW301	ET-368760	68
ED-301911	D10	EI-345474	29	ES-368227	42	ET-368760	19
ED-301911	D11	EI-345474	IC2	ES-368227	SW1	EV-355457	74
ED-301911	D12	EI-349372	35	ES-368238	44	EV-355457	VR202
ED-301911	D1	EI-349372	X1	ES-368238	SW101	EV-355466	75
ED-301911	D2	EI-353421	28	ES-368239	43	EV-355466	VR201
ED-301911	D3	EI-353421	IC701	ES-368239	SW201	EV-368235	76
ED-301911	D14	EI-362588	33	ET-310148	72	EV-368235	VR101
ED-301911	D15	EI-362588	IC1	ET-310148	TR110	EV-368245	77
ED-301911	D101	EI-367271	34	ET-321016	53	EV-368245	VR701
ED-330219	17	EI-367271	IC801	ET-321016	TR1	EV-368268	73
ED-330219	D1	EI-368231	30	ET-321596	71	EV-368268	VR203
ED-330219	D2	EI-368231	IC1	ET-321596	TR107	EV-380204	VR1
ED-330319	7	EI-368240	31	ET-327714	61	EW-363672	11A
ED-330319	D113	EI-368240	IC301	ET-327714	TR108	EW-363684	11B
ED-337990	19	EI-373980	27	ET-337759	54	EZ-345459	21
ED-337990	D101	EI-373980	IC201	ET-337759	TR101	EZ-358816	78
ED-337990	D102	EJ-329610	12	ET-337759	TR102	EZ-358816	BT1
ED-337990	D103	EJ-349401	13	ET-337759	TR105	MZ-553948	57
ED-337990	D104	EJ-366329	J302	ET-337759	TR106	SA-376945J	50
ED-338333	20	EJ-368241	J301	ET-337759	TR109	SK-B374630B1	38
ED-338333	D701	EJ-368242	J401	ET-337759	TR111	SK-B374630B2	39
ED-343410	21	EJ-368244	J601	ET-337759	TR113	SK-B374630B3	40
ED-343410	D3	EJ-369015	58	ET-338244	55	SK-B374630B4	41
ED-344280	10	EJ-369995	J401	ET-338244	TR11	SK-B374630B5	42
ED-344280	D117	EL-368264	36	ET-338410	62	SK-B374630B6	43
ED-344280	D118	EL-368264	IN101	ET-338410	TR104	SK-374631B	26
ED-344280	D301	EO-332116	L1	ET-345625	65	SK-374632B	28
ED-346532	22	EO-338409	37	ET-345625	TR103	SK-374633B	46
ED-346532	D111	EO-338409	LV201	ET-345626	57	SK-374633B	48
ED-346554	14	EQ-337159	38	ET-345626	TR104	SK-374642B	54
ED-346554	D4	EQ-337159	RL1	ET-348829	56	SK-375362	56
ED-346554	D5	EQ-337159	RL2	ET-348829	TR3	SK-375363	55
ED-346567	15	EQ-344440-A	39	ET-348829	TR7	SM-370750C	32
ED-346567	D105	EQ-344440-A	RL101	ET-348829	TR9	SP-370711	62
ED-346567	D106	ER-345751	40	ET-348830	63	SP-370712	63
ED-346571	16	ER-345751	FR701	ET-348830	TR4	SP-374620B	60
ED-346571	D109	ER-355214	R105	ET-348830	TR5	SP-374647K	1B
ED-346576	18	ER-359269	R17	ET-348830	TR10	SP-376972J1	1A
ED-346576	D110	ER-359269	R18	ET-348831	64	ZG-374626	37
ED-348786	11	ER-364696	R112	ET-348831	TR2	ZS-308846	5
ED-348786	D112	ER-368226	R39	ET-348831	TR6	ZS-308846	61
ED-348990	8	ER-368282	R6	ET-348831	TR8	ZS-331567	51
ED-348990	D6	ER-368282	R7	ET-348898	52	ZS-332468	15
ED-348990	D7	ER-368282	R57	ET-348898	TR302	ZS-336351	10
ED-348990	D13	ER-368285	R40	ET-349592	67	ZS-345624	25
ED-348990	D14	ER-368285	R41	ET-349592	TR105	ZS-348375	6
ED-360409	6	ER-372990	R35	ET-349593	59	ZS-351886	14
ED-360409	D801	ER-372990	R36	ET-349593	TR106	ZS-365678	64
ED-368225	12	ER-378497J	R24	ET-353899	58	ZS-419670	22
ED-368225	D15	ER-378497J	R25	ET-353899	TR8	ZS-422076	9
ED-368248	3	ER-378499J	R33	ET-354094	50	ZS-447840	4
ED-368248	D13	ER-378499J	R34	ET-354094	TR4	ZS-463353	49
ED-376938	5	ER-378499J	R107	ET-354365	48	ZS-463353	53
ED-376938	D12	ER-378501J	R31	ET-354365	TR2	ZS-523664	23
ED-376939	4	ER-378502J	R32	ET-354365	TR5	ZW-273802	33
ED-376939	D4	ER-378504J	R103	ET-354365	TR6	ZW-368205	27
ED-376939	D5	ER-378504J	R104	ET-354365	TR7	ZW-653163	34
ED-376939	D6	ER-378504J	R105	ET-354371	49	ZZ-378453	59
ED-376939	D7	ER-378504J	R106	ET-354371	TR16		
ED-376939	D8	ER-378504J	R108	ET-354415	46		
ED-376939	D9	ER-378504J	R109	ET-354415	TR301		
ED-376939	D10	ER-378517J	R401	ET-360067	66		

## ABBREVIATIONS (AMPLIFIER)

ABBREVIATIONS	EXPLANATION
AC	Alternating Current
AMP	AMPlifier
CD	Compact Disc
DC	Direct Current
GND	GrouND
MC	Moving Coil
MM	Moving Magnet
PCB	Printed Circuit Board
REC	RECORD
SW	SWitch
V.DISC	Video DISC
VR	Variable Resistance
VTR	Video Tape Recorder

## AKAI ELECTRIC CO., LTD.

12-14, 2-Chome, Higashi-Kojiya, Ohta-Ku, Tokyo, Japan

TEL: Tokyo (742) 5111 CABLE: HIFIAKAI TOKYO TELEX: J26261

Printed No.871007-I1-0800

Printed Date: October 31, 1987

350 Printed in Japan